Complete Summary

GUIDELINE TITLE

Urgent surgery. In: I guidelines for perioperative evaluation.

BIBLIOGRAPHIC SOURCE(S)

Committee on Perioperative Evaluation (CAPO), Brazilian Society of Cardiology. Urgent surgery. In: I guidelines for perioperative evaluation. Arq Bras Cardiol 2007;89(6):e208-9.

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Any condition requiring surgery

GUIDELINE CATEGORY

Evaluation
Prevention
Risk Assessment
Treatment

CLINICAL SPECIALTY

Anesthesiology
Cardiology
Critical Care
Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To refine and unify the terminology used by the entire multidisciplinary team, including the patients and their family
- To establish new routines, change indication for surgery according to the information obtained during the perioperative evaluation

TARGET POPULATION

Any patient who requires surgery

INTERVENTIONS AND PRACTICES CONSIDERED

Perioperative Monitoring

1. Electrocardiography, including ST interval monitoring in coronary artery disease
2. Biomarker assays of myocardial injury (troponin)
3. Use of Swan-Ganz catheter in limited cases
4. Transthoracic echocardiogram in special situations
5. Intra-aortic balloon pump in extremely severe situations

Therapy

1. Beta-blockers
2. Nitrates (see "Contraindications" field)

MAJOR OUTCOMES CONSIDERED

Perioperative cardiac morbidity and mortality rate

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

A. Sufficient evidence from multiple randomized trials or meta-analyses
B. Limited evidence from single randomized trial or non-randomized studies
C. Evidence only from case reports and series
D. Expert opinion or standard of care

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The participants of these guidelines were chosen among health sciences specialists with hands on and academic experience, thus being characterized as clinical researchers.

The adopted methodology and evidence levels were the same as those used in earlier documents by the Brazilian Society of Cardiology.

Recommendations

- The guidelines must be based on evidences.
- Class division must be used when applicable.
- Degrees of recommendation must be used when applicable, according to the levels of evidence.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Degree or Class of Recommendation

Class I: Conditions for which there is evidence for and/or general agreement that the procedure/therapy is useful and effective

Class II: Conditions for which there is conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of performing the procedure/therapy

Class IIa: Weight of evidence/opinion is in favor of usefulness/efficacy

Class IIb: Usefulness/efficacy is less well established by evidence/opinion

Class III: Conditions for which there is evidence for and/or general agreement that the procedure/therapy is not useful/effective and in some cases may be harmful

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The definitions for levels of evidence (A-D) and classes of recommendation (I-III) are provided at the end of the "Major Recommendations" field.

Urgent Surgery

Perioperative Monitoring

- Electrocardiogram (ECG) daily (in addition to those done before surgery) until the third postoperative day; **Class I, Level of Evidence C**
- Myocardial injury markers: Biomarker assays (troponin) should be done daily until the third day after surgery; **Class I, Level of Evidence A**
- Swan-Ganz catheter: given the controversies regarding the use of this catheter, its use should be restricted to hemodynamically unstable patients immediately before surgery or those at high risk of instability; **Class IIb, Level of Evidence B**
- Monitor the ST segment in the intra and early postoperative periods with at least 2 precordial leads (V4 and V5) in coronary artery disease (CAD) patients; **Class IIb, Level of Evidence C**

- Transthoracic echocardiogram: given the short time available before an urgent procedure for this type of test, it should not be requested routinely but in special situations where diagnostic doubts exist, such as hypertrophic cardiomyopathy and/or valvular disease (Raymer & Yang, 1998; Haering et al., 1996). Recommendations and Levels of Evidence are the following:

  Class I

  - Clinical suspicion of aortic stenosis; **Level of Evidence B**

  Class IIa

  - Patients with CHF without previous assessment of ventricular function; **Level of Evidence D**
  - Grade III obesity; **Level of Evidence D**
  - Preoperative assessment of liver transplant; **Level of Evidence D**

  Class IIb

  - Detection of valvular heart disease; **Level of Evidence B**

  Class III

  - Routinely for all patients; **Level of Evidence D**
- Intra-aortic balloon pump: given the scarcity of literature data on this device, its use should be restricted to patients at high cardiac risk and with high-risk non-cardiac surgeries; **Class IIb, Level of Evidence D**.

Therapy

- Beta-blockers: recommendation for its perioperative prophylactic use in urgent noncardiac surgeries is based on studies of elective surgeries that show reduced acute myocardial infarction, death and post-discharge events. The Recommendations and Levels of Evidence are the following:

  Class I

  - High-risk (American College of Physicians [ACP] Classes II and III) and CAD patients; **Level of Evidence A**
  - **Class IIb**
  - Two or more cardiovascular risk factors (>65 years, hypertension, smoking, diabetes and total cholesterol >240mg/dl) (Mangano et al., 1996); **Level of Evidence B**

  Class III

  - Patients with contraindication to beta-blockers; **Level of Evidence B**
- Nitrates: contraindicated for the prophylaxis of ischemia (Dodds et al., 1993); **Class III, Level of Evidence C**

Definitions:

Levels of Evidence

A. Sufficient evidence from multiple randomized trials or meta-analyses
B. Limited evidence from single randomized trial or non-randomized studies
C. Evidence only from case reports and series
D. Expert opinion or standard of care

Class of Recommendation

Class I: Conditions for which there is evidence for and/or general agreement that the procedure/therapy is useful and effective

Class II: Conditions for which there is conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of performing the procedure/therapy

Class IIa: Weight of evidence/opinion is in favor of usefulness/efficacy

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Effective use of perioperative cardiovascular monitoring and treatment
- Prevention of perioperative complications
- Prevention of perioperative mortality

POTENTIAL HARMS

Not stated

CONTRAINDICATIONS

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Nitrates are contraindicated for the prophylaxis of ischemia.

QUALIFYING STATEMENTS

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- Data or scientific evidences are not always available to allow all the different situations to be analyzed. As customary in medical practice, minute analysis of the patient and problem and the common sense of the team must prevail.
- The surgical intervention does not finish when the patient is bandaged or leaves the operating room. The concept of the word *perioperative* includes the need for a postoperative surveillance whose intensity is determined by the individual level of risk of the patient.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2007

GUIDELINE DEVELOPER(S)

Brazilian Society of Cardiology

SOURCE(S) OF FUNDING

Brazilian Society of Cardiology

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Not stated

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Support: Committee on Perioperative Evaluation (CAPO), Brazilian Society of Cardiology

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the *Journal of Arquivos Brasileiros de Cardiologia*.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on June 3, 2008. The information was verified by the guideline developer on July 2, 2008.

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